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ABSTRACT

The extent and severity of poverty in Minnesota were studied, and the changes occurring over the 1980s were noted. Also studied were the factors affecting the probability that a Minnesota household will be in poverty. Data addressing these questions are from the Minnesota Public Use Micro Sample of the 1980 and 1990 censuses of the United States. The 1980 sample contained data for 72,241 households, and the sample for 1990 contained data for 83,871 households. Both the number and percentage of Minnesotans in poverty rose through the 1980s. In 1979, 9.5% of Minnesotans lived in poverty, while in 1989, 10.2% (440,845 people) lived in poverty. This was mirrored throughout the state as a whole. The majority of those in poverty were white, since whites make up the overwhelming bulk of Minnesota's population. As a group, white citizens of Minnesota have the lowest poverty rate, about one quarter the rate of African Americans and about one-fifth the rate of Native Americans. Education was one of the most significant factors in determining the likelihood of poverty. Each extra year of education possessed by the householder reduced the probability of the household being in poverty by 1.1 percentage points. Speaking English well or very well also had a significant impact on the incidence of poverty. Other differences were noted with regard to household structure, employment status, and racial differences. Educational attainment was particularly important for households headed by a single mother. An analysis shows that it would take about 0.7% of 1990 state income to move all Minnesotans out of poverty, both a lower percentage and a lower dollar amount than a decade earlier. (Contains 8 tables and 20 references.) (SLD)

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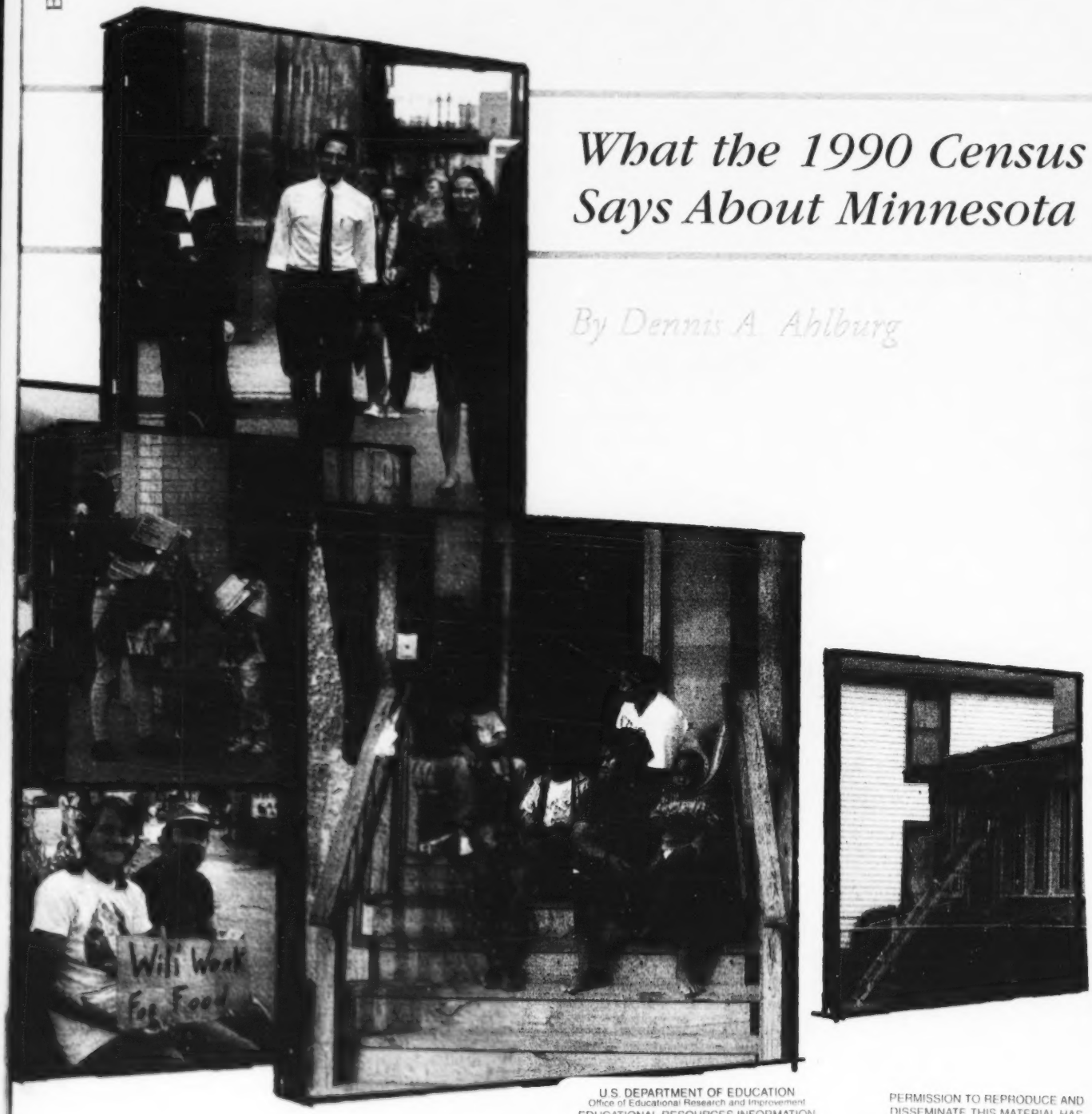

What the 1990 Census Says About Minnesota

By Dennis A. Ahlburg

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Characteristics of Poverty:

Incidence, Change, and Correlates

Dennis A. Ahlburg

The fifth in the series on:
What the 1990 Census Says About Minnesota

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This report is the fifth and final report in a series on *What the 1990 Census Says About Minnesota.* Others in the series are:

Income and Poverty by John Tichy and William J. Craig.

The Path of Urban Decline by John S. Adams, Barbara J. VanDrasek, and Laura J. Lambert.

Are Good Jobs Disappearing? by Dennis A. Ahlburg, Yong-Nam Song, and Scott Leitz.

Minnesota's Housing: Shaping the Community in the 1990s by John S. Adams, Barbara J. VanDrasek, and Elvin K. Wyly.

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Introduction

Over the 1980s, both the percentage and number of people in the United States who were poor grew. In 1979, 13.0 percent of the population lived in poverty, in 1989 13.5 percent of the population did so. The rates were quite unequal by race and ethnicity. The rate for Whites in 1989 was 10.7 percent, African Americans 31.9 percent, American Indians 30.9 percent, Hispanics 28.1 percent, and for Asian and Pacific Islanders 12.2 percent (Danziger and Weinberg 1994, 37). Over the 1980s the rates increased for Whites, African Americans, American Indians, and Hispanics while only the rates for Asians and Pacific Islanders declined.

For the individual, poverty is associated with poorer health, less education, greater exposure to social stress and crime, and diminished economic prospects. Growing up in a poor family increases the chance that an individual will experience poverty as an adult (Gottschalk, McLanahan, and Sandefur 1994, 100). At the national level, poverty and rising inequality have often been viewed as the necessary price of increased economic efficiency as the economy adjusts to the rigors of the new international economic order. After the necessary adjustment, economic benefits should be shared more widely. However, some economists have begun to question the belief in a necessary trade-off between efficiency and equity, as others have long doubted the belief in eventual "trickle down." For example, a recent study of fifty-six countries concluded that rising inequality, which is often accompanied by increased poverty, may harm economic growth. Inequality may cause either real or perceived social and political conflict (as it does at the individual level) and may lead to government policies that retard economic growth (Persson and Tabellini 1994).

But what is the extent and severity of poverty in Minnesota? How did it change over the difficult period of the 1980s? And what factors affect the probability that a Minnesotan household will be in poverty? These are the questions to be addressed in this study.

Data

The data used to address these questions are taken from the Minnesota Public Use Micro Sample (PUMS) of the 1980 and 1990 censuses of the United States, both of which are a 5 percent sample of the population. The unit of observation is the household, headed by an individual sixteen years of age or older, now referred to by the Bureau of the Census as the "householder."[1] The 1980 Minnesota PUMS contains data for 72,241 households headed by a person sixteen years or older and the 1990 PUMS for 83,871. Although the analysis is based only on data from this sample, in order to expand the data to reflect the situation in the entire state we have used weighted data based on a household's chance of being in the sample. For example, if a household of a particular type has a one-in-ten chance of being included in the sample, it is multiplied by ten to form the state average. A household with a one-in-twenty chance of being included would be multiplied by five.

The Measurement of Poverty

Before moving to a discussion of the incidence of poverty, it is useful to be clear on the definition used. The definition of poverty used in this study is the federal definition established by the Office of Management and Budget, based upon the amount of money needed to purchase a least-cost nutritionally adequate food plan. Since families spend one-

[1] One person in each household is designated the "householder." The householder is, in most cases, the person, or one of the persons, in whose name the household is owned, being bought, or rented, and whose name is listed as person one on the census questionnaire. If there is no such person in the household, any adult household member fifteen years and over could be designated the householder. Households are classified by type according to the sex of the householder and presence of relatives. A family household is composed of persons living together who are related by birth, marriage, or adoption. Nonfamily households are composed of a householder living alone or with nonrelatives only.

third of their budget on food, the poverty level is roughly three times the value of the core food budget. The poverty line varies depending on a household's size, the presence of children under the age of eighteen, and the age of the householder (under sixty-five years or sixty-five years and older). For example, in the 1990 Census the poverty level for a family of four adults was $12,790. For a family of four, two of whom were children, it was $12,575. In our analysis, if the total income of a household in the sample was below the appropriate poverty threshold, then the family or individual was classified as "poor."

The official definition of poverty has been criticized for overestimating poverty because it does not include non-cash benefits such as food stamps and Medicaid, and it does not take into account improvements in the quality of commodities over time. It has also been criticized for underestimating poverty. Families now spend less than one-third of their income on food, so it is argued that the poverty multiplier should be greater than that used. A higher multiplier would increase the proportion of the population in poverty.

Neither of these criticisms questions the fundamental approach used to establish the poverty line. Amartya Sen (1985, 1987), however, has argued that such measurement schemes use the wrong metric. They are concerned with "opulence" (income or commodity possession) rather than with the essence of human well-being which is *being* well. Poverty, in this view, should be concerned with fundamental "capabilities" such as being able to live long, being well nourished, being healthy, being literate, having personal and political freedom, and the like.[2]

Faced with these different approaches, we must decide whether to accept the official measure of poverty as a useful, although imperfect, measure of "poverty," or reject it out of hand. I choose to accept it as one useful measure of the economic condition of Minnesotans

[2] A related view, although with different policy prescriptions, is expressed by Rahnema (1992) who criticizes what he calls poverty based on "materialities." He is concerned with how perceptions of what constitutes poverty vary across cultures and over time and with how the "poor" perceive their own situation. He believes that "the answer to imposed forms of material poverty are to be found in people's own ethical and cultural approach to poverty" (p. 171) and calls for a form of "voluntary" or "convivial" poverty (p. 172).

and as a rough guide to the challenges they face. "Capabilities" or "well-being" are affected by income, although not necessarily defined by it. Low income makes it harder although not impossible for an individual to acquire at least some important attributes of "well-being." As John Adams, Laura Lambert, and Barbara VanDrasek (1995) noted in an earlier report on urban poverty, the term poverty "denotes a serious lack of the means for maintaining a decent existence."

The Incidence of Poverty

Table 1 presents data on the incidence of poverty by race in Minnesota in the 1980 and 1990 censuses. Since income data in the census refer to the previous year, the poverty data refer to 1979 and 1989. Both the number and percentage of Minnesotans living in poverty rose over the intervening decade. In 1979, 356,370 Minnesotans (9.5 percent) lived in poverty while in 1989, 440,845 (10.2 percent) did so, an increase in number of 24 percent. The increase for the state mirrored that of the nation as a whole, which experienced a rise in poverty from 13.0 percent to 13.5 percent. As William Craig and John Tichy (1995) noted in an earlier report on poverty in this series, Minnesota slipped from having the sixth lowest poverty rate in the nation to having the twelfth lowest. Further, they found that virtually all of the growth in poverty was among the poorest of the poor, those Minnesota households whose income was less than 75 percent of the poverty level.

Table 1. Poverty in Minnesota

	Race of Householder					
	White	African American	American Indian	Asian	Other	Total
1980*						
Number of Poor Persons	324,790	11,600	11,000	6,080	2,900	356,370
Rate of Poverty (percent)	8.5	24.2	32.2	25.5	26.3	9.5
Percent of All Those in Poverty	91.1	3.3	3.1	1.7	0.8	100
1990*						
Number of Poor Persons	387,665	17,060	21,900	9,440	4,780	440,845
Rate of Poverty (percent)	9.0	36.2	45.9	27.3	31.7	10.2
Percent of All Those in Poverty	87.9	3.9	5.0	2.1	1.1	100

* Race and poverty status are based on the characteristics of the householder: poverty status of the household in this table is determined by the income of the householder alone; all individuals in the household are characterized by the race of the householder. The single exception to these rules is the poverty rate for "Total," which is based on published census results, and which includes the income of all people in the household. "Asian" includes Asian and Pacific Islanders.

The vast majority of those in poverty were White, since Whites make up the overwhelming bulk of the state's population. However, White Minnesotans as a group have the lowest poverty rate—most recently about one-fifth the rate of American Indians and about one-fourth the rate for African Americans. While poverty rates increased somewhat over the decade for White Minnesotans, they increased markedly for African American and American Indian Minnesotans, rising from three times the rate for Whites in 1980 to four times in 1990

for African Americans, and from four to five times for American Indians.[3] As a consequence, the gap between the poverty rate for Whites and that for other racial groups increased over the 1980s, and the percentage of the poor who were minorities rose from 8.9 percent to 12.1 percent. The percentage of the state's total population who were members of minority groups was a little less than 6 percent in 1990. Thus minorities were significantly over-represented among the poor.

Minority households differ from non-minority households in a number of ways that may explain their higher poverty rates. For example, income usually rises with age, and the median White Minnesotan was thirty-two years of age while the median minority Minnesotan was twenty-two years of age. Minorities also have a disproportionate number of single-parent households who have relatively low income. Analysis carried out by Craig and Tichy showed that these characteristics explain some but not all of the differences in poverty rates by race in the Twin Cities. Below, we reach the same conclusion using a much more comprehensive set of controls for differences between minority and non-minority households.

For the nation, there was an increase in poverty among American Indians from 27.5 percent in 1979 to 30.9 percent in 1989. Poverty among African Americans declined slightly from 32.5 percent to 31.9 percent. For Whites it increased from 10.2 percent to 10.7 percent (Danziger and Weinberg 1994, 37). Thus, the poverty rate among African Americans in Minnesota is now moderately above the national figure, and for American Indians it is far higher than for the nation as a whole.

Later in this report we will see that employment is a critical factor that decreases the chance that a household will be in poverty. But, as we can see from Table 2, employment is not a guarantee of escape from poverty. Table 2 reports data for the "working poor," that is individuals in households where the head of the household is employed. In 1989, 41.1 per-

[3] No data is presented for Hispanics because the Census Bureau defines Hispanics as an ethnic group, not a race. The "Other" category consists mostly of Hispanic people who reject this definition, but these people are the exception; the majority of Hispanics in Minnesota report themselves as White and are included in those totals.

cent of poor Whites, 36.2 percent of poor African Americans, 37.8 percent of poor American Indians, and 35.2 percent of poor Asians were working poor. As a percentage of each racial group, the working poor increased over the 1980s with large absolute increases for African Americans and American Indians. Minority Minnesotans are a slightly smaller fraction of the working poor than they are of the poor in general.

Table 2. Working Poor in Minnesota

	Race of Householder				
	White	African American	American Indian	Asian	Other
1980					
Number of Poor Working Persons	129,959	4,380	5,460	2,140	1,540
Working Persons as a Percent of All Poor	40.0	37.8	49.6	35.2	53.1
Percent of Total Working Poor	90.6	3.0	3.8	1.5	1.1
1990					
Number of Poor Working Persons	159,541	6,180	8,280	3,320	2,800
Working Persons as a Percent of All Poor	41.1	36.2	37.8	35.2	58.6
Percent of Total Working Poor	88.6	3.4	4.6	1.8	1.6

Table 3 reports poverty data for 1979 and 1989 by age of the householder. The first row of data shows the number of people in poor households by the age of the householder and the third row expresses this number as a percentage of all people who are poor. The second row shows the percentage of households headed by a person of a particular age that are poor. The incidence of poverty is highest among households with a young head (ages sixteen to thirty-five) and for the elderly. The incidence of poverty rose considerably over

the 1980s for the youngest households, those headed by an individual sixteen to twenty-five years of age, and was relatively steady or declined for the oldest three groups of households. The largest drop in poverty was for households headed by an individual sixty-five years of age or older. But note that while the percentage of young households who were poor increased, a smaller percentage of all poor people lived in households with a young head.

Table 3. Poverty in Minnesota by Age of Householder

	Age of Householder					
	16-25	26-35	36-45	46-55	56-65	> 65
1980						
Number of Poor Persons in Households	67,700	90,600	63,240	40,580	31,080	63,159
Rate of Poverty (percent)	17.7	8.7	6.8	6.0	6.7	13.9
Percent of All Those in Poverty	19.0	25.4	17.7	11.4	8.7	17.7
1990						
Number of Poor Persons in Households	66,181	131,119	93,419	39,240	32,740	78,139
Rate of Poverty (percent)	27.9	11.2	7.5	5.7	6.8	12.8
Percent of All Those in Poverty	15.0	29.7	21.2	8.9	7.4	17.7

The incidence of poverty is greater in Minnesota households headed by women than by men, and is particularly high in those headed by unmarried women. Fully 34 percent of individuals in single-female-headed households were in poverty in 1989, as were 24 percent in 1979. Single women and their children constituted about 40 percent of all persons in poverty in both censuses, yet are only 8 percent of all Minnesota households.

Nationwide the incidence of poverty increased slightly over the 1980s for each household type shown in Table 4 (U.S. Bureau of Census 1992, 460), but the only group to experience a disproportionate increase in the State of Minnesota was single women. While poverty among single-female-headed households rose a substantial 10 percent in Minnesota, the poverty rate nationwide for single mothers with children rose only from 42 percent to 44 percent. It is possible either that the economic position of these Minnesota women worsened over the 1980s or that many poor single women moved to Minnesota, but the first is the more likely explanation. The incidence of poverty is also high in families headed by women whose husbands were not present in the home at the time of the census. Because poverty among female-headed households is a particularly important social issue, we will examine the factors associated with poverty for these households in some detail below.

Table 4. Poverty of Persons in Minnesota by Gender and Marital Status of Householder

	Male Householder		Female Householder	
	Married	Single	Married	Single
1980				
Number of Poor Persons	173,638	41,060	6,940	134,720
Rate of Poverty (percent)	5.8	13.8	8.3	23.9
Percent of All Those in Poverty	48.7	11.5	1.9	37.8
1990				
Number of Poor Persons	185,698	58,986	15,760	180,396
Rate of Poverty (percent)	5.7	15.2	9.6	33.9
Percent of All Those in Poverty	42.1	13.4	3.6	40.9

Two earlier reports in this series on the census focused on differences in poverty by geography. Craig and Tichy (1995) discussed differences between the metro area and outstate Minnesota, and Adams, Lambert, and VanDrasek (1995) compared changes in poverty in the Twin Cities with those in ten other metropolitan areas around the country. The poverty rate in the Twin Cites in 1989 was 8.2 percent and in outstate Minnesota 12.5 percent (Craig and Tichy 1995). As shown below, this difference remains even after we control for differences in education, age of householder, household type, and other variables. Since the cost of living in outstate areas is comparable to that in the Twin Cities, these differences reflect real differences in the extent of economic hardship. Poverty in the Twin Cities metro area is concentrated in the central city areas, with modest growth over the last twenty years in the number of census tracts in the metro area with poverty rates of 40 percent or more. For more detail on poverty rates by county and areas within the Twin Cities, consult the Craig and Tichy (1995), Adams et al. (1995), and Korenman (1997) studies.

The Poverty Gap

The above analysis informs us of the extent of poverty in Minnesota, but it does not tell us about its depth. That is, when poverty occurs, how severe is it? A useful way of looking at the severity of poverty is to ask how much money it would take to eradicate it altogether? This amount of money expressed as a percentage of state income (defined as the income received from all sources during the year by the residents of Minnesota) is referred to as "the poverty gap."

Table 5 reports the number of dollars needed to move each group in the state out of poverty in 1979 and 1989. Since the bulk of the poor are White, more dollars are needed to move Whites out of poverty than any other group. In 1979, it would have taken $684 million (1989 dollars) to move every poor Minnesotan above the poverty line. In 1989, less than $585 million dollars would have been required. This decrease over the 1980s of almost

$100 million dollars, despite the rise in the number of poor persons by almost 85,000 (see Table 1), suggests that the severity of the average person's poverty has lessened considerably. To illustrate, the average amount of money per person needed to eradicate poverty in 1979 was $1,920 (1989 dollars), and in 1989 that figure fell to $1,327 per person. This, along with the state becoming wealthier by almost $12 billion in real terms, brought the poverty gap down from about 1 percent of state income to only .71 percent.

Table 5. Amount of Money Needed to Bring All Persons in Minnesota Out of Poverty

	Race					
	White	African American	American Indian	Asian	Other	Total
1980						
Amount (in millions)	630.4	22.2	14.2	14.9	2.9	684
Percent of Total Gap	92.0	3.2	2.2	2.2	0.4	100
Percent of State Income*	.90	.03	.02	.02	.01	.97
1990						
Amount (in millions)	514.4	24.5	24.2	14.5	7.3	585
Percent of Total Gap	87.9	4.2	4.1	2.5	1.3	100
Percent of State Income**	.63	.03	.03	.02	.01	.71

* State personal income in 1980: $70.1 billion (1989 dollars). Total amount of money needed: **$684,112,571.**

** State personal income in 1990: $82.2 billion (1989 dollars). Total amount of money needed: **$584,886,166.**

Source: Statistical Abstract of the United States, 1992

The Correlates of Poverty

The incidence of poverty is a function of both economic and demographic characteristics of individuals and households. Poverty is related to a lack of human capital needed to obtain a job with adequate pay—education, work experience, language skills, and the like—and, possibly, to a shift in the nature of jobs available from higher paying manufacturing jobs to lower paying service jobs. It is also related to demographic events such as marital disruption and unmarried childbearing (Moffitt 1992; Danziger and Weinberg 1994; Garfinkel and McLanahan 1994; Ahlburg and De Vita 1992). Indeed, these latter changes were found by Bane and Ellwood (1986) to be responsible for nearly half of all spells of poverty. Changes in family structure and other demographic events such as births, deaths, and divorce lead to both transitory and chronic poverty.

Reported in Table 6 are the results of a regression of poverty on variables commonly found to be associated with poverty. The first column shows the regression coefficient, the second the standard error, and the third the marginal effect. Since the dependent variable, poverty, is a binary variable (a household is either in poverty or it is not) probit analysis is used instead of ordinary least squares analysis because the latter would fail to constrain poverty to binary (zero or one) values, clearly a major flaw (see Griffiths, Hill, and Judge 1993, 738ff). The overall model is statistically significant as indicated by the chi square statistic and the fit of the model is superior to that of reasonable alternative models.

Table 6. Correlates of Poverty in Minnesota, 1990

Variable	Coefficient	Standard Error	Marginal Effect (percent)
Constant	.694	.100	
Householder employed	-.914	.018	-10.4
Spouse employed	-.513	.023	-5.9
Age of Householder	-.014	.001	-0.2
Occupation			
Service	.217	.024	2.5
Farm	.392	.023	4.5
Blue collar	-.188	.019	-2.1
Education	-.093	.003	-1.1
English proficiency	-.173	.082	-2.0
Metropolitan	-.374	.017	-4.3
Household structure			
Married couple, kids	.295	.029	3.4
Single father	.631	.055	7.2
Single mother	1.168	.031	13.3
Single male	-.084	.064	ns
Single female	.031	.051	ns
Non-family	.880	.021	10.0
Household size	.115	.008	1.3
Race			
African American	.580	.055	6.6
American Indian	.655	.055	7.4
Asian	.532	.077	6.1
Other	.392	.109	4.5

ns = not significant

The marginal effects are the effects of each independent variable on the probability that a Minnesota household was in poverty. For example, the marginal effect of a continuous variable such as years of education indicates that in 1989, each extra year of education possessed by the head of the household decreased the probability that the household was in poverty by 1.1 percent. The marginal effect of variables such as English language proficiency, the householder and spouse employment, household type, and job type are measured relative to the category of the variable omitted from the regression. For English language it is speaking English well or very well relative to speaking it less well or not at all; for service, farm, and blue collar occupations it is being in these occupations rather than in white collar occupations; for employed head or employed spouse it is being employed rather than not; and for household type shown it is each type compared to a married couple without children. For example, holding the effects of the other variables constant, a female-headed household with children was 13.3 percentage points more likely to be in poverty than a household composed of a childless married couple. These estimates assume that the factors affecting the probability of being in poverty are those shown in the tables. If there are other factors that affect this probability and they are correlated with the factors we are considering, household type for example, then the estimated effects are biased. That is, they are either too big or too small.

The Importance of Work

In 1990, employment was a major factor in avoiding poverty. If the householder was employed, the probability that the household was living in poverty was 10.4 percent lower than if the head was not employed. If the spouse of the householder was also employed, the probability was an additional 5.9 percent lower.

Although we did not have data on years of work experience possessed by the householder, age is often used as a proxy for it. We found that households headed by older individuals were less likely to be in poverty, each extra ten years of age decreasing the probability

of poverty by 2 percentage points. Among those employed, we found that if the head of household worked on a farm or in the service sector, the household was more likely to be poor by 4.5 and 2.4 percent, respectively, than in other employment sectors. Somewhat surprisingly, we found that blue collar households were 2.1 percent less likely than white collar households to be poor.

Education and Language

Holding employment and the other variables constant, each extra year of education possessed by the householder reduced the probability of the household being in poverty by 1.1 percentage points. Thus, a household headed by a college graduate would be almost 5 percent less likely to be poor than an identical household headed by an individual with a high school diploma.

Speaking English well or very well had a significant impact on the incidence of poverty. Those in a household whose head spoke English well or very well were 2 percentage points less likely to be in poverty than those in households where the head spoke English less well. As the size of Minnesota's non-English speaking population grows, the debate over language skills will become more and more prominent. What this study and the earlier study on good jobs (Ahlburg, Song, and Leitz 1995) has shown is that the labor market rewards those who speak English well and punishes those that do not.

Locale Differences

Significant differences in poverty were also found between metropolitan and non-metropolitan households in Minnesota, with the metro group defined as families residing in the five-county Twin Cities area. In 1989, a metro household was 4.3 percent less likely to be in poverty than a non-metro household with the same characteristics. This is a slight increase on the difference observed in 1979, which was 3.4 percent. The Ahlburg, Song, and Leitz

study showed that this metro/non-metro difference in incomes was attributable to differences in earnings, not in the probability of finding a job.

Household Structure

The household structures associated with a high incidence of poverty were single-female householders with children and nonfamily households (individuals unrelated by blood or marriage). These two groups were about 10 percent and 13 percent more likely to be in poverty, respectively, than other households even after controlling for other factors. Single mothers are about twice as likely to be in poverty as single fathers.

Larger households are more likely to be in poverty than smaller families. Single males and females are no more likely than married couples with children to be in poverty, but parents with children are a little over 3 percent more likely to be in poverty than a similar couple without children, even controlling for the age of the householder and other characteristics. Each additional household member increases the probability of poverty by about 1.3 percent.

It is not clear whether the structure of the family causes poverty or poverty causes the form the family takes. There are arguments made and data presented for both directions of causality (see McLanahan and Booth 1989; Moffitt 1992). Some argue that welfare payments lead to behaviors, such as lower work effort and single-parenthood, that lead to poverty (Murray 1984). Others challenge the existence or importance of such effects. Moffitt (1992) considers the evidence and concludes that although welfare does have some disincentive effects, they are sufficiently small that increases in welfare will not increase the number of families in poverty. It is also possible that both poverty and family structure are strongly affected by some third factor, such as family background.

Racial Differences

The racial differences in poverty shown in Table 1 are also evident in the regression results, although they are much smaller than in the raw data. That is, much of the difference in poverty rates between White and minority Minnesotans is explained by differences in the factors shown in Table 6, such as education, age, employment, occupation, location, and household structure. But note that significant differences unattributable to these factors still persist. Controlling for all of the characteristics shown in the table, African American households are 6.6 percentage points more likely to be in poverty than similar White households. For American Indians and Asians, poverty was, respectively, 7.4 and 6.1 percentage points more likely. These racial differences increased over the 1980s. In 1979, African American households were 4.8 percentage points more likely to be poor than similar White households. American Indian and Asian households, respectively, were 4.2 and 5.3 percentage points more likely to be poor.

Single-Mother Households and Poverty

Households headed by single mothers attract considerable attention primarily because of society's concern about the impact of poverty on children raised in such households. Such concerns are relevant to Minnesota. Craig and Tichy (1995) noted that in Minnesota, children in single-parent families have a disproportionate chance of being poor. In fact, fully 70 percent of poor children in the metro area live in such families as do nearly half (46 percent) of poor children in outstate Minnesota.

In addition, single-mother families are one of the most rapidly growing forms of households in the state, especially in the metro area. Adams et al. (1995) found that the number of census tracts in Minneapolis-St. Paul with 40 percent or more of families and

subfamilies headed by single females[4] rose from seventeen in 1970 to seventy-eight in 1990. Over the same period, the number of tracts in poverty (20 percent or more of the population living in poverty) increased from forty-two to ninety. The analysis reported in Table 6 suggests a relationship between poverty and single-motherhood, although the direction of causation is not clear.

What factors affect which single-mother households are poor and which are not? Single-mother households may be poor because they lack factors that reduce the likelihood of poverty, such as a job or education, or because they suffer a greater penalty than other household types for the characteristics they have. That is, they may differ either on the characteristics that are related to poverty (the independent variables of the regression analysis) or on the size of the effect of the characteristics on being poor (referred to as marginal effects in this study). The characteristics of the sample of all households and single-mother households are shown in Table 7 and the results of regression analysis on the sample of single-mother households in Table 8. The variables in Table 8 and the interpretation are similar to those in Table 6.

From Table 7, single-female-headed households do not seem to be poor because they are less likely to have an employed or educated head. Nor do differences in language skills or location seem to explain the differences. Where the single-mother households differ most notably from other Minnesota households is in size and in the race and age of the householder. Single-mother households are larger, younger, and much more likely than other households to be minorities.

[4] A female-headed subfamily is a woman and one or more of her children who live with a relative other than her husband, where that relative is the head of the household.

Table 7. Characteristics of All Households and Single-Mother Households in Minnesota, 1990

	All Households	Single-Mother Households
Employed (percent)	68.0	65.7
Average Age (in years)	49.1	35.9
Education (in years)	12.6	12.6
English proficiency (percent)	99.5	98.9
Metropolitan (percent)	35.0	45.0
Household size (number of persons)	2.7	3.2
Race (in percent)		
African American	1.9	4.6
American Indian	0.6	2.1
Asian	1.0	0.9

The factors that determine whether a single-mother household is poor or not are similar to those that distinguish between poor and non-poor households elsewhere: age, education, race, and employment of the householder; and size and location of the household (see Table 8). However, the impact of these factors among female-headed households is much greater. An extra year of education by the head of household reduces the risk of poverty by 3.3 percent, three times the impact for all households. The impact of employment is very large: an employed single mother is only half as likely to be poor as a non-employed one, while for all households the impact of employment is to reduce the chance of poverty by 10 percent. In addition, young single mothers run a higher risk of poverty than older ones. A household headed by an eighteen-year-old is 16 percent more likely to be poor than a household headed by a twenty-eight-year-old. This impact is eight times larger than in the general population.

Table 8. Correlates of Poverty for Single Mothers in Minnesota, 1990

Variable	Coefficient	Standard Error	Marginal Effect (percent)
Constant	2.807	.369	
Head employed	-1.495	.053	-47.0
Age	-.042	.001	-1.6
Occupation			
Service	.562	.059	20.0
Farm	.544	.223	18.0
Blue collar	-.023	.070	ns
Education	-.089	.014	-3.3
English proficiency	.221	.315	ns
Metropolitan	-.392	.053	-14.8
Household size	.166	.022	5.1
Race			
African American	.328	.115	12.4
American Indian	.551	.126	20.7
Asian	.168	.274	ns
Other	.172	.231	ns

ns = not significant

Racial effects are also larger. Households headed by African American single women are 12.4 percent more likely to be poor than White single women and American Indian single mothers are 20.7 percent more likely to be poor than White single mothers. In the general population, these racial differences are 6.6 and 7.4 percent, respectively. The differences between Asian women and White women were not statistically significant.

Conclusion

Over the 1980s, the incidence of poverty in Minnesota increased. This development is very troubling because poverty has considerable negative effects on the welfare of individuals, families, and households, and although an inescapable welfare "trap" does not exist in the U.S., those who are raised in poverty are more likely to experience poverty as an adult than those who are not. Thus the future prospects of children raised in poverty is particularly troubling. The keys to avoiding poverty are clear: work and productive attributes, such as education and English language proficiency, which increase the chances of employment and increase earnings. Certain household forms are associated with a higher probability of being in poverty, particularly single-mother households and, to a lesser extent, single-father households. It is not possible to state conclusively whether these forms of household are a cause or a consequence of poverty.

Among single-mother households, the same set of factors was associated with an increased risk of being in poverty as among all households. In particular, employment and education are very important, indeed much more so than in the population at large. Being a single mother and heading a household does not necessarily imply that that household will be in poverty, but if the single mother is young, a minority, and has little education and no job, then the household she heads is very likely to be poor.

This study has shown that about one in ten Minnesotans live in poverty, a better record than for the nation as a whole. However, this overall average hides very significant differences among racial groups in Minnesota. Poverty rates among racial minorities are three to four times those of White Minnesotans and, although a large part of the difference reflects differences in education, employment, household structure, and other factors that affect poverty, sizable differences by race remain that cannot be explained by such factors. A previous study undertaken in this series (Ahlburg, Song, and Leitz 1995) showed that some of the differences in these factors, namely employment and earnings, could not be explained

by factors valued in the labor market and could reflect racial discrimination. Thus, differences in poverty rates by race in Minnesota quite possibly reflect racial discrimination and, as noted above, these differences for African Americans and American Indians increased over the 1980s in Minnesota.

Finally, we have shown that it would take about 0.7 percent of 1990 state income to move all Minnesotans out of poverty, both a lower percentage and a lower dollar amount than a decade earlier. On average, the amount of money per person required to raise each one above the poverty line is lower as well, indicating that poverty on the whole in Minnesota, while becoming more common, became less severe. Of course, such a reallocation of funds would need to be made continually unless the underlying causes of poverty were remedied. Some of these have been identified in this and the earlier study—lack of education and work experience, inadequate English-language skills, discrimination. Whether such a reallocation should be made is a highly contentious issue and whether it could, in fact, be done is highly unlikely, particularly in the current political environment.

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